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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/852,164	05/08/2001	James David Fainer	81928.0005	3968

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EXAMINER

MEUCCI, MICHAEL D

ART UNIT	PAPER NUMBER
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2142

DATE MAILED: 09/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/852,164	Applicant(s) FAINER ET AL.	
	Examiner Michael D Meucci	Art Unit 2142	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) • | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>5/8/01</u> . • | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:
 - a. Many typographical errors occur throughout the disclosure. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification. Such errors occur on lines 5, 12, and 13 of page 3, and line 2 of page 4.
 - b. Lines 23-24 of page 3 in the disclosure designate a "signal router/snoop bus" as item 18 in Fig. 2 while line 25 of page 3 designates item 18 as a "serial router." Examiner believes applicant meant to specify "signal router/snoop bus" on line 25 of page 3 as displayed in Fig. 2. Appropriate correction is required.
 - c. It is unclear as to what is meant to be disclosed by "Global Fabric" in line 29 of page 3 of the disclosure. Clarification of the matter is required.
 - d. Examiner believes the disclosure references Fig. 1 where Fig. 2 is meant to be specified on lines 8 and 11 of page 4. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claim 3 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim cannot be dependent upon itself. It is believed by the examiner that the applicant meant to make claim 3 dependent on claim 2. For the

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purpose of applying art, it will be presumed that the applicant meant to make claim 3 dependent on claim 2. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claim 1 rejected under 35 U.S.C. 102(e) as being anticipated by Ofek (U.S. 6,754,210 B1).

a. As per claim 1, Ofek teaches: a network interface adapted to be connected to the storage area network (lines 10-15 of column 4, line 29 of column 4 through line 27 of column 5, and Fig. 1, 7, 10, and 13); a controller connected to the network interface for controlling the functions of the monitoring device (lines 7-23 of column 20, and Fig. 1, 7, 10, and 13); a GPS receiver connected to the controller for supplying a synchronized timing signal to the controller (abstract, lines 50-60 of column 6, lines 52-59 of column 8, line 59 of column 9 through line 14 of column 10, and Fig. 13).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2-3 rejected under 35 U.S.C. 103(a) as being unpatentable over Ofek as applied to claim 1 above, and further in view of Dietz et al. (U.S. 6,651,099 B1) hereinafter referred to as Dietz.

a. As per claim 2, Ofek fails to teach the controller as a field programmable gate array. However, Dietz discloses: "The monitor embodiment of the present invention is preferably implemented in application-specific integrated circuits (ASIC) or field programmable gate arrays (FPGA)," (lines 39-41 of column 5).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have the controller as a field programmable gate array. Field programmable gate arrays are very well known in the art and motivation for their use is that they can be programmed after manufacture and are reconfigurable (FPGA: Howe). It is for this reason that one of ordinary skill in the art would have been motivated to have the controller as a field programmable gate array in the system as taught by Ofek.

b. As per claim 3, Ofek teaches: a serializer/deserializer connected to the network interface (lines 9-18 of column 14); a serial router connected to the serializer/deserializer and to the controller (line 61 of column 16 through line 7 of column 17, and Fig. 9, 10, and 13); a peripheral bus interface adapted to be connected to a peripheral bus (lines 10-14 of column 4, lines 14-27 of column 5, and lines 18-25 of column 19); a FIFO connected to the controller and to the peripheral bus interface (lines 24-31 of column 13, lines 60-64 of column 14, lines 19-40 of column 15, and Fig. 7);

and a timer connected to the controller and receiving the timing signals supplied by the GPS receiver (abstract, lines 59-67 of column 9, line 66 of column 13 through line 8 of column 14, and Fig. 12 and 13).

8. Claim 4 rejected under 35 U.S.C. 103(a) as being unpatentable over Ofek in view of Dietz as applied to claim 3 above, and further in view of Prakash et al. (U.S. 6,434,626 B1) hereinafter referred to as Prakash.

a. As per claim 4, Ofek teaches: the network interface is a Fibre Channel interface for connecting to a Fibre Channel (line 65 of column 4 through line 27 of column 5, lines 15-22 of column 9, lines 9-14 of column 14, and Fig. 5A).

Ofek fails to teach: the peripheral bus interface is a peripheral component interconnect (PCI) interface for connecting to a PCI bus. However, Prakash discloses: "Performance monitoring OSM 110 issues messages to local devices across bus 111 which may be, for example, a Peripheral Component Interconnect (PCI) bus," (lines 3-6 of column 6).

It would have been obvious for one of ordinary skill in the art at the time of the applicant's invention to have the peripheral bus interface as a peripheral component interconnect (PCI) interface for connecting to a PCI bus. PCI bus is very well known in the art and motivation for their use is that they are processor independent and commonly used in many computer systems (PCI: Howe). It is for this reason that one of ordinary skill in the art would have been motivated to have the peripheral bus interface as a peripheral component interconnect (PCI) interface for connecting to a PCI bus in the system as taught by Ofek and Dietz.

9. Claim 5 rejected under 35 U.S.C. 103(a) as being unpatentable over Ofek in view of Dougherty (U.S. 6,405,104 B1).

Ofek teaches: a storage area network (abstract, line 65 of column 4 through line 27 of column 5, line 46 of column 19 through line 6 of column 20, and Fig. 1); and the monitoring device including a GPS receiver for supplying a synchronized timing signal to the receiver (abstract, lines 59-67 of column 9, line 66 of column 13 through line 8 of column 14, and Fig. 12 and 13).

Ofek fails to teach: a plurality of monitoring devices, and the plurality of monitoring devices sampling data from the network in a synchronized manner. However, Dougherty discloses: "a technique which employs a control station which sends a command signal to multiple "circuit monitors" to synchronously sample the system at the present or a future time," (lines 36-39 of column 1).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have a plurality of monitoring devices sampling data from the network in a synchronized manner. "This approach is adequate for characterizing a power system on demand or at a scheduled time," (lines 39-41 of column 1 in Dougherty). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to have a plurality of monitoring devices sampling data from the network in a synchronized manner in the system as taught by Ofek.

10. Claim 6 rejected under 35 U.S.C. 103(a) as being unpatentable over Ofek in view of Dougherty (U.S. 6,405,104 B1).

Ofek teaches: receiving GPS timing signals by the monitoring device and using the GPS signals for synchronization (abstract, lines 59-67 of column 9, line 66 of column 13 through line 8 of column 14, and Fig. 12 and 13).

Ofek fails to teach: sampling information using a plurality of monitoring devices; and synchronizing the sampling of information by the plurality of monitoring devices using the received GPS timing signals. However Dougherty discloses: "a technique which employs a control station which sends a command signal to multiple "circuit monitors" to synchronously sample the system at the present or a future time," (lines 36-39 of column 1).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to sample information using a plurality of monitoring devices and to synchronize the sampling of information by the plurality of monitoring devices using the received GPS timing signals. "This approach is adequate for characterizing a power system on demand or at a scheduled time," (lines 39-41 of column 1 in Dougherty). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to sample information using a plurality of monitoring devices and to synchronize the sampling of information by the plurality of monitoring devices using the received GPS timing signals in the system as taught by Ofek.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Potash et al. (U.S. 4,882,739) discloses method of adjusting clocks of multiple data processors to a common time base.

Brown et al. (U.S. 5,226,120) discloses apparatus and method of monitoring the status of a local area network.

Spragne et al. (U.S. 5,422,814) discloses GPS receiver with map coordinate system outputs.

Osterdock et al. (U.S. 5,440,313) discloses GPS synchronized frequency/time source.

Joo (U.S. 5,757,786) discloses time synchronization apparatus and method thereof using a GPS of a satellite.

Dinkins (U.S. 5,854,793) discloses GPS sync of CTS transmitters for an interactive network.

Walsh et al. (U.S. 5,953,384) discloses automatic measurement of GPS cable delay time.

Goldman (U.S. 6,016,322) discloses apparatus and method for self synchronization in a digital data wireless communication system.

Olorig (U.S. 6,057,863) discloses dual purpose apparatus, method and system for accelerated graphics port and fibre channel arbitrated loop interfaces.

Ojard et al. (U.S. 6,130,894) discloses off-line broadband network interface.

Kapanen, (U.S. 6,134,234) discloses master-slave synchronization.

Johnson (U.S. 6,324,586 B1) discloses system for synchronizing multiple computers with a common timing reference.

Tawil (U.S. 6,421,723 B1) discloses method and system for establishing a storage area network configuration.

Ginossar (U.S. 6,477,143 B1) discloses method and apparatus for packet network congestion avoidance and control.

Dowling (U.S. 6,636,499 B1) discloses apparatus and method for cluster network device discovery.

Allen et al. (U.S. 6,643,586 B1) discloses system and method to determine fibre channel device locations using GPS.

Iwasaki et al. (U.S. 6,665,267 B1) discloses access management method, communication apparatus, and monitor and control system.

Phillips (Have storage area networks come of age?) discloses fibre channel and SAN.

Molero et al. (On the effect of link failures in fibre channel storage networks) discloses fibre channel and SAN.

Molero et al. (Performance analysis of storage area networks using high-speed LAN interconnects) discloses fibre channel and SAN.


12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Meucci at (703) 305-1382, or at (571) 272-3899 after October 26th, 2004. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Harvey, can be reached at (703) 305-9705, or at (571) 272-3896 after October 26th, 2004. The fax phone number for this Group is (703) 308-5358.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [michael.meucci@uspto.gov].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to Group receptionist whose telephone number is (703) 305-3900.


JACK B. HARVEY
SUPERVISORY PATENT EXAMINER